



APV

Technical Paper

**'Parts' v
'Components'**

30 October 2023



APV

www.apv.net

About APV

APV provides specialist valuation, asset management and asset accounting services for a wide range of organisations and sectors. While based in Australia, we enjoy close partnerships with our clients across the globe, including hundreds of local, state and national governments, their agencies, universities, manufacturing and transportation businesses and not-for-profit organisations.

Our services include:

- Financial reporting valuations delivered in accordance with the IFRS, IPSAS, FASB or jurisdictional standards (such as AASB / XRB) covering land, buildings, transport infrastructure, water and waste water infrastructure, energy infrastructure, plant and equipment, etc.
- Insurance valuations for public sector, not-for-profit sector and commercial assets.
- Asset accounting advice with respect to valuation and depreciation methodologies and compliance reviews
- Asset management advice and training with respect to asset management frameworks, plans and systems
- Customised training and professional development with a focus on asset accounting and asset management.

As leaders in our field, we are proud of our unblemished record of audit approval. APV is comprised of a mix of valuers, engineers, quantity surveyors, accountants and IT specialists. We tailor our services to meet client needs, helping them get the most from their assets and plan effectively for the future.

And while valuation and depreciation can be complex, we keep it simple. We're constantly evolving to offer customers more flexibility and control. We use leading methodologies and custom-built valuation tools that are compliant, comprehensive, logical and truly relevant.



Table of Contents

Table of Contents	3
Introduction	4
'Infrastructure Financial Accounting in Local Government' Report.....	5
AASB May 2105 Residual Value Decision	6
CPA Australia Guide to Valuation and Depreciation.....	6
Dec 2022 Update to AASB13	7
Practical Application	8



Introduction

Traditionally, many entities have either not disaggregated their assets or only disaggregated them down to 'Component' Level. For example, the 'components' of a building typically are based on the different elements that are managed independently from each other such as –

- Sub-structure
- Structure
- Floor Coverings
- Fit-Out
- Rook
- Services – Mechanical
- Services – Electrical
- Services – Hydraulic
- Services – Fire
- Services – Security
- Services – Transport

However, these do not represent the appropriate level of disaggregation as required by the accounting standards. Specifically –

- AASB108 example 3, which was highlighted in the Dec 2022 update to AASB13, confirms that 'useful life' in the accounting standards means 'RUL'.
- AASB116 Property Plant and Equipment requires each 'part' of the asset that has a different useful life (RUL) to be depreciated separately.
- AASB108 example 3 confirms that for the calculation of depreciation using a straight-line approach the formula is (carrying amount less residual value) / RUL.
- The AASB May 2015 Residual Value decision confirmed that if the renewal cost of a component was less than the replacement cost of the component, that the component was comprised of two different parts with each needing to be depreciated separately.

This paper provides background to the issue of proper 'disaggregation' and why the 'part' of the asset requiring separate depreciation is not the same as the asset 'component'.



'Infrastructure Financial Accounting in Local Government' Report

In the early 2010's there was much discussion around integrating asset accounting and asset management. One of the first papers introducing the concept of short-life and long-life parts was the Tasmanian Auditor-General's report number 5 of 2013-14 'Infrastructure Financial Accounting in Local Government'.



In order for the asset management practices to correlate with the Australian Accounting Standards, there is a need for councils to separately identify the shorter term useful lives from the longer term useful lives without relying on residual values and incorrectly classified non-depreciable components. An example of the componentisation for a complex road asset where a council has planned to renew a road pavement by recycling and adding stabilising material after 50 year life is:

1. Surface \$40 000 – depreciated over 25 years
2. Pavement base (short life) \$50 000 (150 mm base to be recycled after 50 years) – depreciated over 50 years
3. Pavement sub-base (long life) \$50 000 – depreciated over 100 years to allow for potential obsolescence

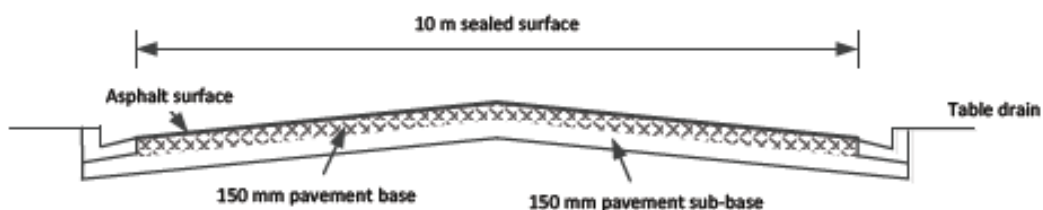


Figure V: Road Asset Components recognising Planned Recycling Renewal Treatments



AASB May 2105 Residual Value Decision

This was soon followed by the AASB Residual Value Decision which confirmed –

- The Residual Value was the amount received upon its disposal.
- Disposal is the point when the control over the asset is relinquished
- As a consequence the Residual Value for most assets would be either nil or insignificant
- For assets which comprised components subject to regular renewal the AASB indicated that technically such component needs to be split into a short-life part and a long-life part with each part separately depreciated.
- The short-life and long-life parts are not required to be physically identifiable. I.e. They should be based on difference between replacement cost and the cost of the renewal treatment.
- However – if the difference between the technically correct approach and the View Two approach (where Residual Values are adopted for the long-life part) are immaterial the AASB stated that the use of Residual Values may be appropriate
- Depreciation is to be determined by reference to the Depreciable Amount. As such the formula for depreciation expense (assuming straight-line) is the $(\text{Carrying Amount} - \text{Residual Value}) / \text{Remaining Useful Life}$.

The key difference between this the guidance in the Tasmanian Auditor-General's report was a highlight that the 'parts' did not represent a physical asset but instead referred to different economic costs.

CPA Australia Guide to Valuation and Depreciation

Given the large amount of discussion and inconsistency across jurisdictions, In 2016, CPA Australia published a 'guide to the valuation and depreciation of public sector assets in accordance with the accounting standards'. This was based on the previous 2013 addition based on the international accounting standards.

In respect to assets subject to regular renewal the guide stated –

8.9.7 Depreciation Concepts for Recyclable Assets

The May 2015 decision of the AASB (regarding the definition of Residual Value) highlighted that for assets subject to regular renewal (recyclable assets):

The renewal process results in two components with distinctly different useful lives:

- *Short-life (non-recyclable) component*
- *Long-Life (recyclable) component*

To determine the correct depreciation expense both components would need to be determined and depreciated separately over their useful life using a method that matches the pattern of consumption.



However, the Board also noted that various shortcut methods may be considered by impacted entities, subject to materiality, including identifying the residual value as the separate component and using blended depreciation rates for the different components.

The literal application carries with it a number of implications. This includes the potential need to significantly increase the number of components in the asset register and to undertake reconciliations to ensure the total of the short-life and long-life components equal the total of the actual component. The split between these two components may change from year to year based on changes to the asset management plan.

Entities that have never componentised to this level (short-life and long-life) will need to split the existing components into two components. Analysis undertaken on the differences in approaches indicates that failure to componentise to this level is likely to lead to significant over-statement of depreciation.

The determination of the split between short-life and long-life components requires extensive consideration and needs to take into account the typical asset management practices that the entity employs. For example the value of the long-life part (recycled value) of a dam spillway is typically considered extremely high, as spillways are designed to last for a very long time and, assuming there is no obsolescence, will be maintained at a very high level through regular maintenance. If obsolescence became an issue the value of the long-life part (recycled value) would be reassessed as part of the annual revision of assumptions, resulting in either a change to the valuation and/or a prospective change in depreciation expense.

Dec 2022 Update to AASB13

Given the continued concerns over inconsistency between jurisdictions and different interpretations, the AASB created a 'special project for fair value in the public sector'. The project ran from 2006 – 2022 and resulted in the update to AASB13 in Dec 2022.

The updated Australian guidance referenced a number of other standards. In particular –

- AASB108 example 3 which confirmed that 'useful life' in AASB116 refers to 'RUL' and the correct calculation of straight-line depreciation is carrying amount less residual value divided by RUL
- AASB116 Property Plant and Equipment requires each 'part' within an asset that has a different useful life to be depreciated separately.
- The consequence of this is that it is necessary for any valuation to provide a fair value and estimated RUL for each 'part' of the asset that has a different 'RUL'.



Practical Application

While the required level of disaggregation sounds challenging, in reality it requires no extra effort, As a bonus, it provides the mechanism to ensure full integration between asset accounting and asset management.

For example, because the short-life represents the estimated cost of renewal and based on the condition score we can estimate the RUL of each part, a 10 or 30 years CAPEX renewal program can be automatically produced as part of the valuation process.

That projection can then be enhanced into a Strategic Asset Management Planning Model by the inclusion of maintenance costs and allowance for different treatment strategies.

The slides below, form Asset Valuer Pro, show –

- Valuation of assets at 'component level'
- Components split into 'short-life' and 'long-life' parts
- 30 year project renewal CAPEX based on valuation data

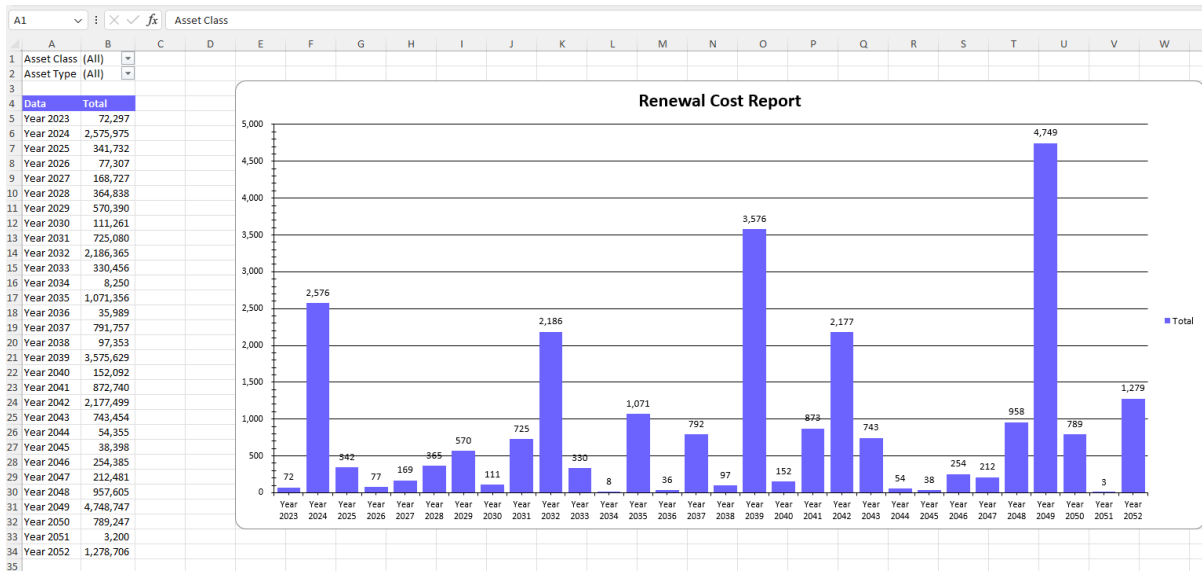
General	Valuation	Location	Components 9	Images 0	Notes 0	Replacement Costs 2
Summary			Detail			
Gross \$278,000	Current Value \$125,367	Depn Expense \$8,183	WA UL 34 yrs	WA RUL 15 yrs		
NAME	GROSS	CURRENT VALUE	DE	WA UL	WA RUL	
01 Sub-Structure	\$27,800	\$15,999	\$285	97.6 yrs	56.1 yrs	
02 Structure	\$55,600	\$29,374	\$659	84.4 yrs	44.6 yrs	
03 Floor Coverings	\$13,900	\$1,145	\$818	17 yrs	1.4 yrs	
04 Fit-Out	\$27,800	\$8,693	\$602	46.2 yrs	14.4 yrs	
05 Roof	\$27,800	\$14,107	\$355	78.3 yrs	39.7 yrs	
61 Serv - Mechanical	\$55,600	\$14,297	\$3,971	14 yrs	3.6 yrs	
63 Serv - Elect	\$27,800	\$18,483	\$326	85.2 yrs	56.6 yrs	
64 Serv - Hydr	\$27,800	\$15,919	\$325	85.5 yrs	49 yrs	
65 Serv - Security	\$13,900	\$7,350	\$842	16.5 yrs	8.7 yrs	



APV

www.apv.net

BUILD719 05 Roof Metal Decking Typical Life Jun 30, 1980 - ?								Edit
Consumption Score 3		Depreciation Policy Apply RUL			Valuation Policy Apportionment Cost			
TYPE	GROSS	CURRENT VALUE	REMAINING SERVICE POTENTIAL	DEPRECIATION EXPENSE	USEFUL LIFE	REMAINING USEFUL LIFE	RESIDUAL VALUE	PROFILE
Short Life 30%	\$8,340	\$3,015	36.15%	\$160	52 yrs	18.8 yrs	\$0	AVP Default SL
Long Life 70%	\$19,460	\$11,092	57%	\$195	100 yrs	57 yrs	\$0	AVP Default SL
	\$27,800	\$14,107		\$355	78.31 yrs	39.74 yrs	\$0	





APV

www.apv.net

About the Author

David Edgerton FCPA

E: David@apv.net

David is an accountant (Fellow CPA Australia) with a valuation, audit and asset management background. He is internationally recognised as a leading expert in the valuation and depreciation of public sector assets. He is a regular presenter at national and international conferences and is a Director of APV Valuers and Asset Management.

He has been actively involved with both the asset accounting and asset management of public sector assets over the past 30 years. This has included –

- Author of CPA Australia's guides to the valuation and depreciation of public and NFP sector assets under the international (IFRS and IPSAS -2013) and Australian (2016) accounting standards.
- Member of the Australian Accounting Standards Board special project team for 'Fair Value in the Public Sector' (2017–22)
- Chair of the Public Sector Assets Collaborative Group which is a special interest committee of 'the Asset Institute'. The group is comprised of representatives of the peak bodies with an interest in the asset management of public sector assets.
- Member of 10 person international review panel for the IPWEA International Infrastructure Financial Management Manual (IIFMM) (2023)

Prior to joining APV in 2006 he spent over 20 years with the Queensland Audit Office where he –

- Held responsibility for the audit of Queensland's local government sector and water sectors
- Managed the audit office's 'Contract Auditors Section'
- Chaired the 'Asset Valuation and Audit Advisory Group'



New South Wales
Suite 1B, Level 16
56 Pitt Street,
Sydney NSW 2000
P (02) 8231 6499

Queensland
Level 18
344 Queen Street
Brisbane QLD 4000
P (07) 3221 3499

South Australia
Level 2
70 Hindmarsh Square
Adelaide SA 5000
P (08) 8311 3949

Victoria
Suite 27
135 Cardigan Street
Carlton VIC 3053

Western Australia
Suite 83
50 St Georges Terrace
Perth WA 6000
P (08) 6323 2338